

# Web Accessibility in Higher Education

## An Evaluation of the Department of Writing Studies Site

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### Introduction

Higher education institutions, including the University of Minnesota, have a duty to provide websites that are accessible to web users with and without disabilities. This duty stems from United States law, web best practices, and the universities’ own mission statements and accessibility guidelines. Two concepts, accessibility and universal design, guide the creation of successful, accessible websites.

The purpose of this study is to conduct a preliminary accessibility audit of a website managed by the University of Minnesota’s Department of Writing Studies to determine if the site meets baseline accessibility requirements. The evaluation was completed using the Functional Accessibility Evaluator tool. The evaluation is supplemented by a brief review of accessibility/universal design and an overview of accessibility requirements affecting the University. The results of this initial evaluation suggest that, while the University of Minnesota may acknowledge the importance of accessibility, the University must take further steps to uphold the spirit of federal law and the University’s own mission. Further evaluation, including accessibility testing with prospective users at the University, is advised to better understand user needs and issues.

### Literature Review

Two terms are key to defining the interaction between the Internet and users with disabilities: accessibility and universal design. A recent voluntary resolution agreement between the U.S. Office of Civil Rights and the South Carolina Technical College System defined accessibility as

“a person with a disability is afforded the opportunity to acquire the same information, engage in the same interactions, and enjoy the same services as a person without a disability in an equally effective and equally integrated manner, with substantially equivalent ease of use” (Staat, 2013).

Accessibility can be considered the “applied practice” of universal design, which focuses on designing “products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design” (Lippincott, 2004; Connell et al., 1997). A website that incorporates universal design is therefore built to be accessible from the beginning, instead of retrofitted to accessibility standards.

### Accessibility Regulation

Federal laws such as the Americans with Disabilities Act (ADA) ban discrimination on the basis of disability. While publically funded universities, by law, cannot discriminate against people with disabilities, web accessibility-specific laws only dictate minimum accessibility standards for government websites. Today, most universities (including the University of Minnesota) voluntarily adopt accessibility guidelines to ward off accusations of discrimination.

### Evaluation

#### Method

I audited 14 pages of the Department of Writing Studies website using the Functional Accessibility Evaluator (FAE) developed by the University of Illinois. FAE reviews pages using WCAG 2.0 (Web Content Accessibility Guidelines 2.0), which the University of Minnesota has selected as its web accessibility standard.

The Department of Writing Studies website uses the same template as all College of Liberal Arts (CLA) sites managed in the Drupal content management system. For this reason, I could audit a relatively small section of the department’s site while producing results relevant to any other sites using the CLA Drupal template. Most issues found at the text level can be fixed by the department’s content editors. Issues with the template must be fixed by the CLA Drupal web developer.

#### Results

- Identified eleven web accessibility rule violations (barriers to accessibility that violate rule requirements for WCAG 2.0 compliance).
- Violations occurred in five WCAG guidelines: Adaptable, Keyboard Accessible, Navigable, Input Assistance, and Compatible.
- Every page contained at least one rule violation. Five rule violations occurred on every page, two violations occurred on five pages, and four violations occurred only on one page.
- Two of the eleven violations can be fixed by web content editors. The remaining violations must be fixed by a web developer.

#### Courses Page Violations

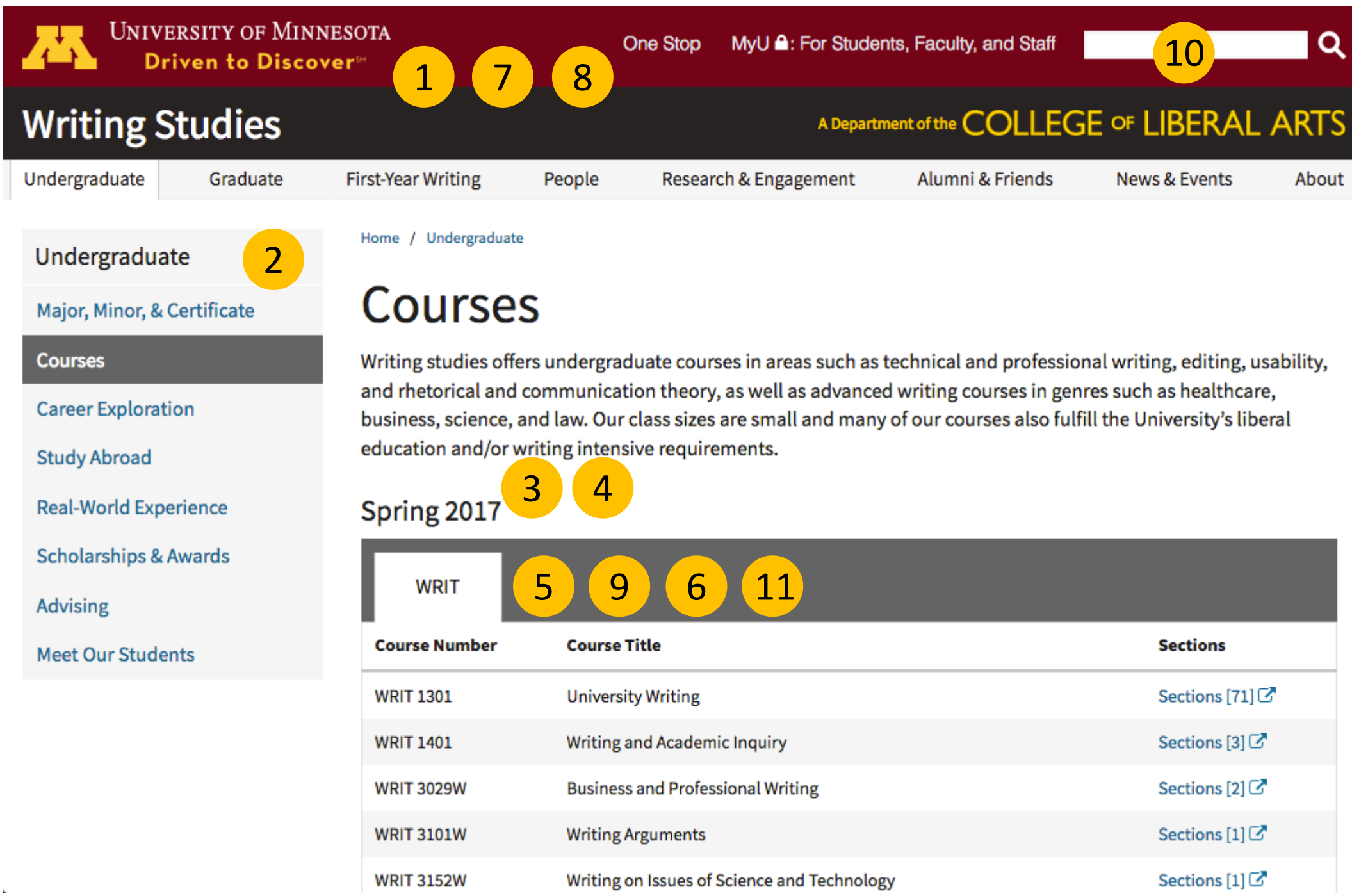


Figure 2. Rule violations and accessibility barriers on the Courses page.

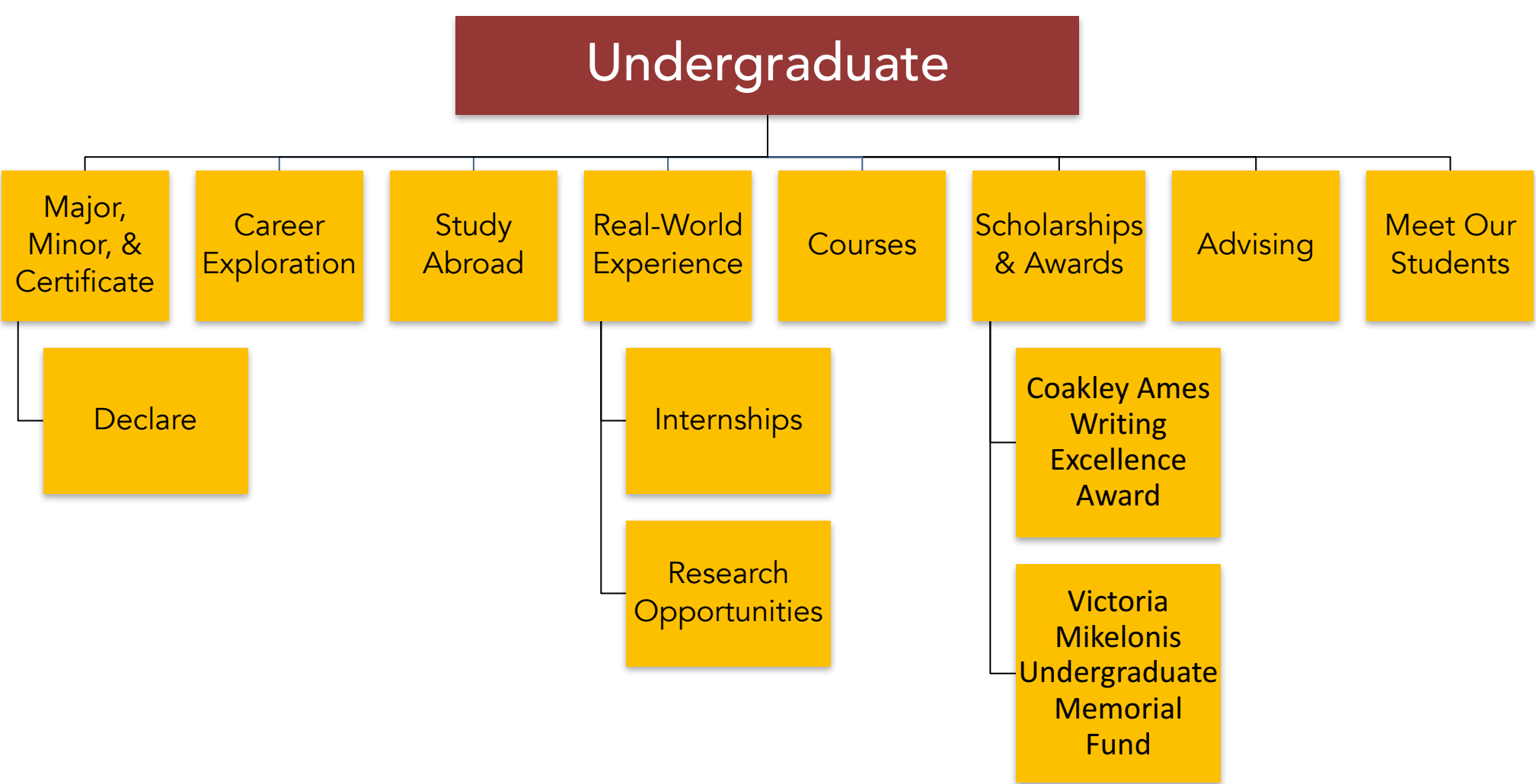


Figure 1. Department of Writing Studies web pages evaluated using FAE.

Table 1. Rule violations in the Undergraduate section of the Department of Writing Studies website.

Guideline	Violated Rule	Affected Pages
Adaptable	Landmarks must be uniquely identifiable (1)	14
	All content must be contained in landmarks (2)	14
	Headings nested in landmarks (3)	5
	Headings must be nested properly (4)	5
	<section> element role semantics (5)	1
Keyboard Accessible	Widget roles require keyboard support (6)	1
Navigable	<contentinfo> landmark: no more than one (7)	14
	<banner> landmark: no more than one (8)	14
Input Assistance	Widget labels must be descriptive (9)	1
	Form controls must have labels (10)	14
Compatible	Widgets must have label (11)	1

- 1 7 8 The names “banner” and “contentinfo” are used on multiple HTML elements on the page. This is confusing to screen readers.
- 2 This menu isn’t in an accessible landmark, so it is difficult to identify using a screen reader or keyboard-only navigation.
- 3 4 Heading hierarchy skips a level. This is confusing and might indicate missing content.
- 5 9 6 11 The tabbed course identifier navigation is not descriptively labeled to support screen readers and keyboard-only navigation.
- 10 The search form lacks a label to support screen readers and keyboard-only navigation.

### Conclusion

While the University of Minnesota has acknowledged its responsibilities to web users with disabilities, units within the University may not be fully compliant with the University’s set minimum standard, WCAG 2.0. In the case of CLA’s Department of Writing Studies website, an exploratory accessibility audit identified multiple violations of the lowest acceptable level of web accessibility.

Accessibility isn’t important solely because it is legally required. As the University’s Disability Services Policy reminds us, “access to educational, work, co-curricular, and other opportunities for people with disabilities enriches the academic and social environment for all members and guests of the University community” (Disability Services, 2010). Universal design, the concept behind accessibility, reminds us that designing to include disability is designing to include the greatest number of people possible.

### Recommendations

Some of the accessibility barriers identified in this audit can be addressed at the author-level, by the web content editors who make simple text changes and additions to the site. Other issues, including those found on all pages and issues specific to the Courses page, must be addressed by the site’s web developer. These changes could benefit everyone using a College of Liberal Arts Drupal site.

This audit is meant to be the first of many reflections on the accessibility of websites at the University of Minnesota. Future studies may extend the breadth of the audit to include more pages or sites. Even more importantly, future work could include an accessibility study with actual users with disabilities. Only users with disabilities can fully assess site accessibility.

### Selected References

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